

16336-27PC.8125.txt
 SEQUENCE LISTING

559752
 PCT/PTO 06 DEC 2005

<110> UNIVERSITY OF WASHINGTON

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SHAYAKHMETOV, Dmitry M.

<120> CAPSID-MODIFIED ADENOVIRUS VECTORS AND METHODS OF USING THE S.

<130> 16336-27PC

<140> PCT/US04/

<141> 2004-05-03

<150> US 60/466,858

<151> 2003-05-01

<160> 8

<170> PatentIn version 3.1

<210> 1

<211> 185

<212> PRT

<213> adenovirus

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Asp Lys Leu Thr Leu Trp Thr Thr Pro Ala Pro Ser Pro Asn Cys Arg
 1 5 10 15

Leu Asn Ala Glu Lys Asp Ala Lys Leu Thr Leu Val Leu Thr Lys Cys
 20 25 30

Gly Ser Gln Ile Leu Ala Thr Val Ser Val Leu Ala Val Lys Gly Ser
 35 40 45

Leu Ala Pro Ile Ser Gly Thr Val Gln Ser Ala His Leu Ile Ile Arg
 50 55 60

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Phe Asp Glu Asn Gly Val Leu Leu Asn Asn Ser Phe Leu Asp Pro Glu
 65 70 75 80

Tyr Trp Asn Phe Arg Asn Gly Asp Leu Thr Glu Gly Thr Ala Tyr Thr
 85 90 95

Asn Ala Val Gly Phe Met Pro Asn Leu Ser Ala Tyr Pro Lys Ser His
 100 105 110

Gly Lys Thr Ala Lys Ser Asn Ile Val Ser Gln Val Tyr Leu Asn Gly
 115 120 125

Asp Lys Thr Lys Pro Val Thr Leu Thr Ile Thr Leu Asn Gly Thr Gln
 130 135 140

Glu Thr Gly Asp Thr Thr Pro Ser Ala Tyr Ser Met Ser Phe Ser Trp
 145 150 155 160

Asp Trp Ser Gly His Asn Tyr Ile Asn Glu Ile Phe Ala Thr Ser Ser
 165 170 175

Tyr Thr Phe Ser Tyr Ile Ala Gln Glu
 180 185

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<212> PRT

<213> adenovirus

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Asp Lys Leu Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro Asn Cys Arg
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Ile His Ser Asp Asn Asp Cys Lys Phe Thr Leu Val Leu Thr Lys Cys
 20 25 30

Gly Ser Gln Val Leu Ala Thr Val Ala Ala Leu Ala Val Ser Gly Asp
 35 40 45

Leu Ser Ser Met Thr Gly Thr Val Pro Ser Val Ser Ile Phe Leu Arg
 50 55 60

Phe Asp Gln Asn Gly Val Leu Met Glu Asn Ser Ser Leu Lys Lys His
 65 70 75 80

Tyr Trp Asn Phe Arg Asn Gly Asn Ser Thr Asn Ala Asn Pro Tyr Thr
 85 90 95

16336-27PC.ST25.txt

Asn Ala Val Gly Phe Met Pro Asn Leu Leu Ala Tyr Pro Lys Thr Gln
 100 105 110

Ser Gln Thr Lys Asn Asn Ile Val Ser Gln Val Tyr Leu His Gly Asp
 115 120 125

Lys Thr Lys Pro Met Ile Leu Thr Ile Thr Leu Asn Gly Thr Ser Glu
 130 135 140

Ser Thr Glu Thr Ser Glu Val Ser Thr Tyr Ser Met Ser Phe Thr Trp
 145 150 155 160

Ser Trp Glu Ser Gly Lys Tyr Thr Thr Glu Thr Phe Ala Thr Asn Ser
 165 170 175

Tyr Thr Phe Ser Tyr Ile Ala Gln Glu
 180 185

<210> 3

<211> 182

<212> PRT

<213> adenovirus

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Asp Pro Leu Thr Leu Trp Thr Thr Pro Asp Pro Pro Pro Asn Cys Ser
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Leu Ile Gln Glu Leu Asp Ala Lys Leu Thr Leu Cys Leu Thr Lys Asn
 20 25 30

Gly Ser Ile Val Asn Gly Ile Val Ser Leu Val Gly Val Lys Gly Asn
 35 40 45

Leu Leu Asn Ile Gln Ser Thr Thr Thr Thr Val Gly Val His Leu Val
 50 55 60

Phe Asp Glu Gln Gly Arg Leu Ile Thr Ser Thr Pro Thr Ala Leu Val
 65 70 75 80

Pro Gln Ala Ser Trp Gly Tyr Arg Gln Gly Gln Ser Val Ser Thr Asn
 85 90 95

Thr Val Thr Asn Gly Leu Gly Phe Met Pro Asn Val Ser Ala Tyr Pro
 100 105 110

Arg Pro Asn Ala Ser Glu Ala Lys Ser Gln Met Val Ser Leu Thr Tyr
 115 120 125

16336-27PC.ST25.txt

Leu Gln Gly Asp Thr Ser Lys Pro Ile Thr Met Lys Val Ala Phe Asn
 130 135 140

Gly Ile Thr Ser Leu Asn Gly Tyr Ser Leu Thr Phe Met Trp Ser Gly
 145 150 155 160

Leu Ser Asn Tyr Ile Asn Gln Pro Phe Ser Thr Pro Ser Cys Ser Phe
 165 170 175

Ser Tyr Ile Thr Gln Glu
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Asp Pro Leu Thr Leu Trp Thr Thr Pro Asp Pro Pro Pro Asn Cys Thr
 1 5 10 15

Leu Arg Gln Glu Leu Asp Ala Lys Leu Thr Leu Cys Leu Thr Lys Asn
 20 25 30

Glu Ser Ile Val Asn Gly Ile Val Ser Leu Ile Gly Val Lys Gly Asp
 35 40 45

Leu Leu His Ile Gln Pro Thr Thr Thr Thr Val Gly Leu His Leu Val
 50 55 60

Phe Asp Arg Gln Gly Arg Leu Val Thr Thr Thr Pro Thr Ala Leu Val
 65 70 75 80

Pro Gln Ala Ser Trp Gly Tyr Lys Gln Gly Gln Ser Val Ser Ser Ser
 85 90 95

Ala Val Ala Asn Ala Leu Gly Phe Met Pro Asn Val Ser Ala Tyr Pro
 100 105 110

Arg Pro Asn Ala Gly Glu Ala Lys Ser Gln Met Leu Ser Gln Thr Tyr
 115 120 125

Leu Gln Gly Asp Thr Thr Lys Pro Ile Thr Met Lys Val Val Phe Asn
 130 135 140

Gly Asn Ala Thr Val Asp Gly Tyr Ser Leu Thr Phe Met Trp Thr Gly
 145 150 155 160

16336-27PC.ST25.txt

Val Ser Asn Tyr Leu Asn Gln Gln Phe Ser Thr Pro Ser Cys Ser Phe
 165 170 175

Ser Tyr Ile Ala Gln Glu
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<211> 185

<212> PRT

<213> adenovirus

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Asp Lys Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Pro Asn Cys Lys
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Ile Asp Gln Asp Lys Asp Ser Lys Leu Thr Leu Val Leu Thr Lys Cys
 20 25 30

Gly Ser Gln Ile Leu Ala Asn Val Ser Leu Ile Val Val Asp Gly Lys
 35 40 45

Tyr Lys Ile Ile Asn Asn Asn Thr Gln Pro Ala Leu Lys Gly Phe Thr
 50 55 60

Ile Lys Leu Leu Phe Asp Glu Asn Gly Val Leu Met Glu Ser Ser Asn
 65 70 75 80

Leu Gly Lys Ser Tyr Trp Asn Phe Arg Asn Glu Asn Ser Ile Met Ser
 85 90 95

Thr Ala Tyr Glu Lys Ala Ile Gly Phe Met Pro Asn Leu Val Ala Tyr
 100 105 110

Pro Lys Pro Thr Ala Gly Ser Lys Lys Tyr Ala Arg Asp Ile Val Tyr
 115 120 125

Gly Asn Ile Tyr Leu Gly Gly Lys Pro Asp Gln Pro Val Thr Ile Lys
 130 135 140

Thr Thr Phe Asn Gln Glu Thr Gly Cys Glu Tyr Ser Ile Thr Phe Asp
 145 150 155 160

Phe Ser Trp Ala Lys Thr Tyr Val Asn Val Glu Phe Glu Thr Thr Ser
 165 170 175

Phe Thr Phe Ser Tyr Ile Ala Glu Gln
 180 185

16336-27PC.ST25.txt

<210> 6

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<212> PRT

<213> adenovirus

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Ser Ile Asn Thr Leu Trp Thr Gly Ile Asn Pro Pro Pro Asn Cys Gln
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Ile Val Glu Asn Thr Asn Thr Asn Asp Gly Lys Leu Thr Leu Val Leu
 20 25 30

Val Lys Asn Gly Gly Leu Val Asn Gly Tyr Val Ser Leu Val Gly Val
 35 40 45

Ser Asp Thr Val Asn Gln Met Phe Thr Gln Lys Thr Ala Asn Ile Gln
 50 55 60

Leu Arg Leu Tyr Phe Asp Ser Ser Gly Asn Leu Leu Thr Glu Glu Ser
 65 70 75 80

Asp Leu Lys Ile Pro Leu Lys Asn Lys Ser Ser Thr Ala Thr Ser Glu
 85 90 95

Thr Val Ala Ser Ser Lys Ala Phe Met Pro Ser Thr Thr Ala Tyr Pro
 100 105 110

Phe Asn Thr Thr Thr Arg Asp Ser Glu Asn Tyr Ile His Gly Ile Cys
 115 120 125

Tyr Tyr Met Thr Ser Tyr Asp Arg Ser Leu Phe Pro Leu Asn Ile Ser
 130 135 140

Ile Met Leu Asn Ser Arg Met Ile Ser Ser Asn Val Ala Tyr Ala Ile
 145 150 155 160

Gln Phe Glu Trp Asn Leu Asn Ala Ser Glu Ser Pro Glu Ser Asn Ile
 165 170 175

Ala Thr Leu Thr Thr Ser Pro Phe Phe Phe Ser Tyr Ile Thr Glu Asp
 180 185 190

Asp Asn

<210> 7

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16336-27PC.ST25.txt

<212> PRT

<213> adenovirus

<400> 7

Asn Ile Asn Thr Leu Trp Thr Gly Ile Asn Pro Thr Glu Ala Asn Cys
 1 5 10 15

Gln Met Met Asp Ser Ser Glu Ser Asn Asp Cys Lys Leu Ile Leu Thr
 20 25 30

Leu Val Lys Thr Gly Ala Leu Val Thr Ala Phe Val Tyr Val Ile Gly
 35 40 45

Val Ser Asn Asn Phe Asn Met Leu Thr Thr Tyr Arg Asn Ile Asn Phe
 50 55 60

Thr Ala Glu Leu Phe Phe Asp Ser Ala Gly Asn Leu Leu Thr Ser Leu
 65 70 75 80

Ser Ser Leu Lys Thr Pro Leu Asn His Lys Ser Gly Gln Asn Met Ala
 85 90 95

Thr Gly Ala Ile Thr Asn Ala Lys Ser Phe Met Pro Ser Thr Thr Ala
 100 105 110

Tyr Pro Phe Asn Asn Asn Ser Arg Glu Lys Glu Asn Tyr Ile Tyr Gly
 115 120 125

Thr Cys His Tyr Thr Ala Ser Asp His Thr Ala Phe Pro Ile Asp Ile
 130 135 140

Ser Val Met Leu Asn Gln Arg Ala Ile Arg Ala Asp Thr Ser Tyr Cys
 145 150 155 160

Ile Arg Ile Thr Trp Ser Trp Asn Thr Gly Asp Ala Pro Glu Gly Gln
 165 170 175

Thr Ser Ala Thr Thr Leu Val Thr Ser Pro Phe Thr Phe Tyr Tyr Ile
 180 185 190

Arg Glu Asp Asp
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<210> 8

<211> 12

<212> PRT

<213> adenovirus

16336-27PC.ST25.txt

<400> 8

Ser	Lys	Cys	Asp	Cys	Arg	Gly	Glu	Cys	Phe	Cys	Asp
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